State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary #_____
HRI #_____
Trinomial_____
NRHP Status Code_____
Other Listings_____
Review Code_____ Reviewer_____ Date_____

 Resource name(s) or number(assigned by recorder) N-221B

P1. Other Identifier: 80'x120' Subsonic Wind Tunnel

***P2. Location:** ☒Not for Publication ☐Unrestricted ***a. County** Santa Clara
***b. USGS 7.5' Quad** San Francisco North, Calif. **Date:** 1995
***c. Address** 855 Parsons Avenue **City** Moffett Field **Zip** 94035
***e. Other Locational Data:**

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries.)

N-221B is a massive wind tunnel located on Parsons Avenue. It is part of the N-221 (40'x80' Wind Tunnel) complex. N-221B has exposed steel framing with horizontal corrugated siding on the inside. N-221B extends out from N-221 in a northwest direction. The tunnel bells out and terminates in a louvered screen with a large rounded frame made of cement asbestos panels. Six electric drive wing tunnel fans provide for 110+ knot airspeeds in a 80-ft x 120-ft test section. Full size aircraft models can be installed and tested for aerodynamic characteristics in the 80 x 120 test section. This Wind Tunnel is reputed to be the world's largest. It is 20,220 sq. ft.

See Continuation Sheet for technical data.

This building appears to be in good condition.

***P3b. Resource Attributes:** (list attributes and codes) HP11– Engineering Structure (Wind Tunnel)

***P4. Resources Present:** ☒Building ☐Structure ☐Object ☐Site ☐District ☐Element of District ☐Other

P5a. Photo

P5b. Photo: (view and date)
View of northwest, (8/12/05)

***P6. Date Constructed/Age and Sources:** 1985

***P7. Owner and Address:**
United States of America as represented by National Aeronautics and Space Administration (NASA)

***P8. Recorded by:**
Page & Turnbull, Inc.
724 Pine Street
San Francisco, CA 94108

***P9. Date Recorded:** 08/12/05

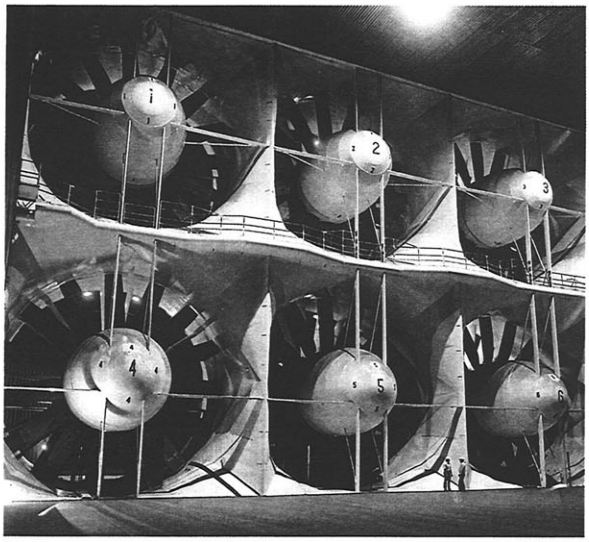
***P10. Survey Type:**
Reconnaissance

***P11. Report Citation:** National Aeronautics and Space Administration, *Technical Facilities Catalog*, Volume 1, publication NHB 8800.5A (1), October 1974.; Technical Information Division, Ames Research Center, *Ames Research Facilities Summary,* 1974.; Donald D. Baals and William R. Corliss, *Wind Tunnels of NASA,* NASA SP-440, 1981.

***Attachments:** ☐None ☐Location Map ☐Sketch Map ☒Continuation Sheet ☐Building, Structure, and Object Record ☐Archaeological Record ☐District Record ☐Linear Feature Record ☐Milling Station Record ☐Rock Art Record ☐Artifact Record ☐Photograph Record ☐ Other (list)

Test Section	40- by 80-Foot	80- by 120-Foot
Max Speed	350 mph	115 mph

Max power: 135,000 hp, 105 MW
Six drive motors
Fan diameter: 40 ft
15 blades per fan
Fan rpm: 36 to 180
Blade angle: -5° to 52°
Maximum airflow: 63 tons/sec



NFAC Drive Fans

NASA
National Aeronautics and Space Administration

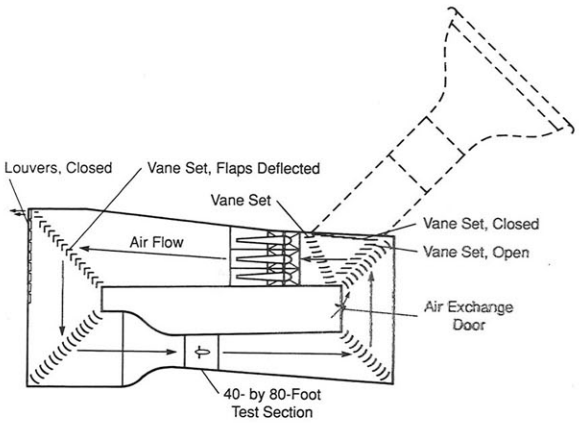
Ames Research Center
Moffett Field, California 94035

NFAC Research

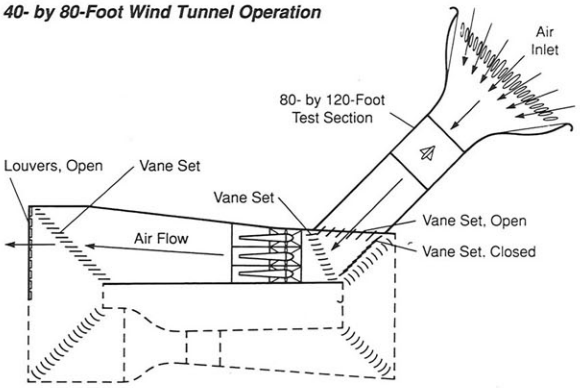
Takeoff and landing, low-speed, cruise
- Conventional aircraft
- V/STOL aircraft
- Rotorcraft

Aeroacoustics

Propulsion integration



40- by 80-Foot Wind Tunnel Operation



80- by 120-Foot Wind Tunnel Operation